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ABSTRACT

The tenth and final volume of this study provides a short, crisp summary of its findings for educators at all levels. Important considerations are suggested for federal and state policymakers as they support schools in their change efforts, and for school people who are committed to making effective and long-lasting improvements in their classrooms. These conclude with "a path to success," consisting of six major practical insights derived from the study as a whole. An annotated bibliography describes the 10 volumes of the study's master report, supporting documents from which the volumes were written, and additional publications that describe various study methodologies and findings for particular audiences. (TE)

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People, Policies, and Practices: Examining the Chain of School Improvement, Volume X

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A Roadmap for School Improvement

Executive Summary of the Study of Dissemination Efforts Supporting School Improvement

EA 016 489

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The Study of Dissemination Efforts Supporting School Improvement engaged literally a cast of thousands. At the peak of activity it involved some 5,000 educators from all parts of the country, with a wide range of roles and responsibilities, whose only commonality was the desire to improve the education of our nation's youth. While it is impossible to thank everyone personally, we pause here to acknowledge their important contributions.

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(continued on inside back cover)

Volume X

A Roadmap for School Improvement

Executive Summary of the Study of Dissemination Efforts Supporting School Improvement

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Executive Summary

BACKGROUND

For the past twenty-five years, the federal government has tried actively to improve America's schools. Tens of millions of dollars have been spent by its various agencies and offices to assist schools in solving their problems and enhancing their educational offerings. A broad array of new instructional practices -- many of them exemplary -- have resulted and are available to interested schools. These encompass virtually all subject areas, especially the basic skills. What is the result of this federal investment? Are schools really improving? If so, what helps them in their efforts? What impedes their progress?

It is one thing to hold as an article of faith that federal support policies contribute to improved local practice. But when the causal connection is tenuous or questionable, far better to mount a comprehensive investigation to confirm or disprove the connection. Thus, in 1978, the U.S. Office of Education decided to take a close look at the school improvement strategies it supported. The Study of Dissemination Efforts Supporting School Improvement was funded to answer these questions.

The answers we provide are conservative, grounded solidly in data collected from nearly 4,000 educators, the majority of whom worked in 146 school districts. Our conclusions do not deal with the goals, content, or structures of the formal education enterprise; those are the domains of other scholars and decision makers. Rather, they concentrate on how to pursue and successfully complete the course once it has been chosen. No matter what the desired end, getting there requires change, and the process of achieving meaningful change is not automatic, even when the goals are clear and agreed upon. But while getting there is hard work, it can be more than half the fun. It is in this spirit that we present our learnings, believing that they offer clear guidance for those planning the school improvement efforts that will carry the country into the next century.

In one sense, ours is an historical study. Economic constraints were increasing during the years we were examining federal structures and strategies supporting school improvement. More importantly, however, dismantling of the federal education support structure was a part of the platform of a conservative presidential candidate. At the time this report is being written, the Reagan administration has been in office for nearly three years. We have witnessed consolidation of some of the programs we examined; the funds that once supported them are now incorporated into block grants to states. The federal role in education is undergoing critical review. The budgets of numerous programs are squeezed between a deficit and a missile race.

It is noteworthy that, in spite of the crunch, the strategies we examined at the local level are still being widely used by federal and state program offices, and programs just getting off the ground are looking to them as models of effective dissemination.

Thus, even at a time of diminishing involvement and resources at the federal level, our findings are significant for policy makers and immediately useful for practitioners.

- In earlier volumes of our master report series, we tried to capture and fully explore the complexity of school improvement. These volumes provide a full and rich examination of the elements that constitute the critical links in the chain of school improvement, revealing the dynamic interplay between people, policies, and practices. The challenge in this volume is great: to summarize our research and particularly our learnings in crisp, simple statements. These statements must provoke both new understandings leading to action, and new questions that urge the reader to seek greater detail in our other volumes. To do this and still remain honest to the research is a tall order, but one we now attempt.

THE RESEARCH CONTEXT

This study, conducted by The NETWORK, Inc., in collaboration with several other research and development organizations,[1] sought to begin where others had left off. Our brief was to concentrate on the who, the how, and the why of actually implementing school improvement--its dynamics and influences. Understanding these critical processes of implementation could lead to fresh insights and alternatives that might be applied to any policy or content area.

The largest previous research effort to ask similar questions, the Rand Change Agent studies (Berman & McLaughlin, 1975, 1978), had largely discredited federal school improvement strategies. But these studies had examined such strategies in their infancy (in the early 1970s) and had looked only at seed money projects--those designed to stimulate local development. Reliance on a natural process of dissemination or diffusion had not yielded the desired results; the investment in costly demonstration projects, even those that seemed effective in their original sites, did not pay off in successful transplants to other locales. The investment sunk in school improvement remained just that--sunk. And creating unique projects in every needy school district was a prospect too costly to contemplate, though some local development efforts had been successfully transferred to other sites, usually as the result of a conscious attempt to do so. Other studies (e.g., Emrick, Peterson & Argawala-Rogers, 1977) had begun to build a positive case for a strategy of carefully planned transfer or dissemination of proven practices from the locations where they were developed to other schools with similar needs.

At the time our study was initiated, inquiries such as the Rand studies and concurrent work at the Texas R&D Center (Loucks & Hall, 1979) had demonstrated clearly that actual classroom implementation was a central concern. But this work had yielded more questions than answers. What factors contribute to successful implementation? What are the key links in the chain that runs from federal policies to the classroom door? How do the various people, policies, and practices interact to result not only in changes in classroom instruction and curricula now, but in continuation of those changes over time?

Similar questions relating to the purveyors of new practices abounded. Federal programs funded various kinds of delivery systems, in many cases individuals who "linked" schools with new ideas, information, and practices. Previous research had done much to conceptualize and elucidate the variety of linkage roles and functions (Havelock, 1973; Sieber, Louis & Metzger, 1972), but little was known about the specific assistance activities and the characteristics of the assisters that contributed to the success of improvement efforts.

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[1] Among them, the University of Texas's R&D Center for Teacher Education, American University's Knowledge Transfer Institute, the Center for Policy Research, and UCLA's Center for the Study of Evaluation.

Finally, other recent work had suggested an important phase beyond implementation, that of institutionalization (Yin, 1978). What causes some new practices to "stick" and others to be discontinued or to fade away? Federal policy makers were interested in good, long-term investments rather than in ephemeral ones, so this was a particularly important question.

The Study of Dissemination Efforts Supporting School Improvement was designed to take up where previous research left off. It focused intensively and extensively on three general questions:

1. What dissemination strategies are being used to improve schools?

   A large number of agencies, offices, and programs within the former Division of Education (now the Department of Education) had activities to disseminate the information, materials, and practices they funded. Before examining the impact of these strategies on schools, it was necessary to map out what these strategies were. What was disseminated, by whom, and how? Why was a strategy chosen, and what assumptions about schools and people underlay the choice? And, given their constitutional responsibility, what were states doing to improve schooling by capitalizing on successful previous investments and disseminating new practices? How did state efforts intertwine or coexist with the strategies employed by federal programs? Answers to these questions would portray the state of the art of school improvement at the policy level.

2. Are new instructional practices supported by the federal programs actually being implemented in schools?

   Given the number and variety of dissemination efforts supported by the government, are they causing anything to happen in schools? If so, what are the changes that occur? Is the logic of dissemination sound?[2] Where is the impact felt--in schools, by teachers or students? Do the participants feel put upon, or do they feel like partners?

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[2]The logic of dissemination is simple on its face, but exceedingly complex in its realization. Assume that the ultimate goal of all federal dissemination strategies is change and improvement in schools. A critical first step is a demonstrable success in a given local setting, often as the result of a government supported demonstration project. Such successes should spread (or be spread) to other schools, ultimately leading to results in those other schools like those demonstrated in the initial sites. But, it is impossible to be certain about the causes of improved student performance. Therefore, policy makers must put their confidence in evidence that validated practices (i.e., those deemed by some professionally acceptable procedure to be effective and worthy of emulation) have in fact been implemented with reasonable fidelity. With such evidence they can justify continued investment in dissemination or in research and development efforts where the supply of proven practices is scant or nonexistent.

3. What factors contribute to the success of school improvement efforts?

The array of possible factors that could make a difference is endless. Teacher characteristics, assistance, school climate, demographics, change strategy, building and district administrator support--all have been found important by previous studies. But how does the complex of factors interact to effect adoption, implementation, and, ultimately, institutionalization of new practices? Are teachers typically creative initiators of changes in curriculum and instruction, or do they require a push? Are local development efforts that rely principally on internal resources more fruitful and less intrusive than improvement efforts that use externally developed innovations? Here the study had the opportunity to broaden and deepen the knowledge base from previous work by exploring strategies as yet unstudied and by considering every link in the chain from federal policy to school classrooms.

FEATURES OF THE STUDY DESIGN

To answer our research questions, the study examined four distinct levels of the educational system: federal, state, external agency, and local. Our "zoom lens" design began with an overview of all the programs in the U.S. Department of Education that engaged in dissemination or dissemination-related activities intended to improve schools and classrooms. We found a total of forty-five (Hellmer, Harris & Thompson, 1981). Fifteen of these programs, varying widely in terms of strategies, were selected for in-depth analysis at the federal level: nine from the then Office of Education (Shive & Eiseman, 1982) and six from the National Institute of Education (Thompson, 1982). At the state level we examined dissemination activities in ten states[3] representative of the continental forty-eight on a number of variables important to education (such as student population and urban concentration, per pupil expenditures, experience with federal dissemination programs, etc.) (Cox, 1982). In-depth interviews and document analysis contributed to case studies of the state and federal dissemination activities.

The strategies under study represented the dominant options available to policy makers concerned with improving schools. Three used dissemination as a vehicle and one funded local development, thus allowing contrasts and comparisons of strategies relying on locally vs. externally developed practices. A federal program exemplifying each strategy was chosen. The strategies and their programmatic exemplars are:

- Interpersonal Linkage of Validated Practices, exemplified by the National Diffusion Network (NDN), including its ESEA Title I subnetwork targeted to disadvantaged children. This strategy involves federal review and dissemination of validated practices, carried out through personal collaboration among school personnel, the developers of the practices, and professional disseminators;

- Commercial Distribution, exemplified by the Bureau of Education for the Handicapped's Market Linkage Program (now the Office of Special Education). This strategy involves federally supported review of products, with dissemination turned over to commercial enterprises who sell materials to local schools by means of advertising or mailing;

- State Administration of Dissemination, exemplified by ESEA Title IV-C Adoption Grants. This strategy is in character essentially like the Interpersonal Linkage of Validated Practices, but organized and administered at the state level; and

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[3]Arizona, California, Illinois, Maine, Maryland, Michigan, Nebraska, Pennsylvania, South Dakota, and Virginia.

- Local Development/Invention, exemplified by ESEA Title IV-C Development Grants. This strategy involves federal funding for the development of practices that are characterized by indigenous ideas, resources, and substantive control at the local level.

To select our local sites we began with a list of all school districts in each of the ten states that had been involved in the four programs. Using a three-stage iterative process, 146 districts were selected that had adopted or developed a particular innovation (61 practices were represented) under the auspices of one of these programs. Where more than one school in the district had been involved in the effort, we selected what our local contact considered a "typical school." To ensure that we got a full picture of improvement in America's schools, we had all levels of K-12 schools well represented (56% of our schools were elementary, 13% middle or junior high, 26% senior high, and 5% combination). We included five kinds of respondents: users of the innovation, other building faculty, building administrators, district administrators, and local facilitators, that is, people within the district who had had major responsibility for implementing the practice. Over 4,000 local educators participated.

Our interest in the assistance that federal and state programs provided to local schools caused us to include a sample of facilitators based outside the school district. For three of the four programs chosen, specially skilled people were involved in training teachers and providing the assistance necessary for them to learn the new practice. Some had well-defined formal roles in assisting local schools to select and use new practices (e.g., for the NDN and some states), and others had less formal, more ad hoc functions, such as consultants employed by the district to help with development. Ninety-six external facilitators identified by our local school respondents were included in the sample.

Information was gathered through more than 4,000 questionnaires and nearly 500 face-to-face interviews. Practice Profiles developed collaboratively with the developers of each of the 61 innovations (Loucks & Crandall, 1982) were used to gather information about teachers' use of the new practices. Combined with an assessment of the teacher's Level of Use (Hall & Loucks, 1977), these provided a clear picture of the extent and quality of classroom implementation.

Finally, we selected 12 of our 146 local sites for an intensive, year-long field study of the intricacies of school improvement (Huberman & Miles, 1982). The sites were supported by either the National Diffusion Network or ESEA Title IV-C local development grants and represented a considerable range in terms of geographic location, setting, current status of the innovative practice, and progam type. At these sites our researchers were able to explore a broader landscape, examining the interpersonal and organizational dynamics surrounding implementation as the new practices were integrated into the ongoing life of the school. The case studies that were developed used innovative methodologies to uncover new understandings of the effects of school improvement efforts and of the factors behind those efforts (Miles & Huberman, forthcoming).

LEARNINGS

School improvement is an exceedingly complex and intricate process. It not only involves a large number of people and organizations with different roles, but it also is dynamic and unpredictable, changing day by day and minute by minute. While some have characterized our educational systems as "loosely coupled" (Weick, 1979), where an event in one part often has little effect on other parts, our experiences reveal a contradictory image. We saw schools that were seriously engaged in improvement efforts, where energies were mobilized and harnessed by strong leadership. Progress was the product of concentrated effort by hard working teachers, balanced precariously between the drag of their daily demands and the prospect of a more satisfying tomorrow. In such circumstances the smallest event, crisis, action, or decision can have widespread effect, often at the most remote outpost.

What did we find were the results at the local level of federal and state investment in school improvement?

1. School improvement programs supported by the U.S. Department of Education are delivering far-reaching and significant changes in conventional schools.

We found that local schools are not avoiding projects that demand major changes in classroom and school-level practices, such as many of those disseminated by the National Diffusion Network or by state education agencies. In fact, the successful strategies that have evolved over the past ten years have been deliberately shaped to increase local choice and present schools with options for involvement that keep their prerogatives intact. One such NDN practice, described by its developer as a "highly regimented and task-oriented teaching strategy," serves as an integrated language arts curriculum. An intensive, all-morning teaching session consists of drills, independent pupil work, and review in the areas of word recognition and comprehension, study skills, spelling, penmanship, dictation, and creative writing. Despite initial problems with inadequate materials and preparation, teachers in one of our study sites volunteered for and supported the program to an extent that led the central office to mandate the program for the entire district midway through the 1979-80 school year.

Many locally developed practices are equally ambitious. This is as much the case for "conservative" or "traditional" schools as for "innovative" ones. For example, one school system that was seen as conflict-ridden and stagnant began a program to address individual student needs and career interests. Consisting of diagnostic testing of students; conferences among parents, teachers, and students; the development of individualized growth plans; and special activities such as field trips, the project required a full-time coordinator. A careful evaluation, aided by

an outside consultant, determined that its benefits included improved student achievement, self-concept, attitudes about school, and friendliness. The project was subsequently approved for statewide dissemination.

Eventually, some projects get watered down and trivialized, but many retain their original size, bite, and scope. There is strong evidence that substantial changes in instructional practice are mastered by teachers and stabilized within the school or district in the majority of cases and that they are firmly institutionalized in roughly half the cases.

In addition to having strong impact on pupils' achievement and motivation and being diffused throughout their districts, there are equally strong indications that the changes leave in their wake increased instructional and managerial capacities that go beyond the projects themselves. Where school people joined together to attempt major changes and got the appropriate assistance, major changes occurred. Where little was ventured, little was gained.

2. There is consensus among researchers and concurrence by practitioners about the critical ingredients of an effective improvement strategy. The facets of successful adoption and implementation identified in other major empirical studies are also operative in this study.

Essentially, these agreed-upon findings center on involvement more than on content. Access to alternative practices for adoption or development must be systematically provided to promote informed local choice, which fosters greater commitment. Face-to-face contact facilitates the adoption of disseminated practices to a far greater extent than the mere provision of information. Adequate materials and procedural guidelines coupled with responsive, in-person assistance during later implementation are imperative for maximum success. The commitment of teachers and administrators can be engaged as fully (and much more rapidly) by involvement in actual implementation activities as in extended participatory planning and make-ready activities. Finally, we found that, given these favorable conditions, the use of both validated practices (in the case of dissemination) and carefully designed practices (in the case of local development) can yield comparable outcomes. Thus, the significant return on investment envisioned by dissemination strategists can be realized.

The next three learnings describe the most interesting and complicated of these ingredients and represent an elaboration on or advancement beyond the findings from previous research.

3. Forceful leadership is the factor that contributes most directly and surely to major, effective changes in classroom practice that become firmly incorporated into everyday routines.

There are many ways of combining the ingredients mentioned above into a school improvement strategy, and these combinations are less often chosen than dictated by local cultures, constraints, and working arrangements. Still, there are things over which local leaders (i.e., district-level administrators and building principals) nearly always have control.

Ensuring that significant change occurs and that it stays in place entails a number of things: developing or finding a new practice and getting it adopted; freeing up some local resources for it if they can be had, or getting some external resources if they can't; getting authorization to arrange or rearrange schedules, facilities, staff assignments, etc.; keeping the practice a high priority in the face of the inevitable stresses and strains; providing ongoing, knowledgeable assistance; and building the new practice into routine operations, procurements, and regulations.

Unless the project is truly a collective crusade, which was a rare but not unseen case in our sample, making all these things happen involves administrative competence, authority, and responsibility as well as access to both external and internal resources. It happens most often when a central office administrator or an influential principal is involved closely with the project--from its development (of a local one) or identification (of an external one) through its implementation and ultimately to its institutionalization. When that involvement is enlightened, forceful, resourceful, and long-lasting, highly significant changes are carried out and institutionalized.

Enlightened administrators are knowledgeable about new practices; they also have substantive (curriculum coordination, instructional supervision) rather than purely line-administrative jobs. Enlightened and forceful administrators push through ambitious changes and hold tight to the initial magnitude of practice change even when it strains users and conventional working arrangements. They encourage adherence to the original model yet accede to sensible demands for modification. And they police building-level administrators, who in turn monitor users.

Adding resourcefulness to their qualities means just that: these people come up with external funding, free up such local resources as released time and materials, and authorize some bending of local regulations to make the project work better. Most important, they put together an infrastructure for ongoing assistance that often combines local expertise, external consultants, and uncertainty-reducing and debugging mechanisms (meetings, short training cycles, hotlines).

Finally, the best advocates are those who stay with the project rather than turning away (to another priority or another job), or prematurely turning it over to users. They are then in a position to furnish more of these resources longer and attend to the critical task of locking the project into yearly routines, budgets, and regulations.

It is important to stress that we are not advocating knee-jerk authoritarianism as the royal road to school improvement. We are suggesting a key role for a central office administrator who becomes an enlightened advocate of a new practice, who coordinates well with a strong building principal or designee, and who actively assists building-level personnel in mastering the new practice. That person has a better chance of actually producing significant changes that constitute school improvement than would be the case in most other scenarios. By "producing" we mean controlling what happens, reducing unnecessary detours, getting to the desired outcomes without watering down the original intent, extending the practice throughout the district, and making it a durable part of the local landscape. Other strategies are more democratic but they are also more adventurous and therefore less certain to get these results. Also, such adventures are usually more expensive and seem more feasible in times of financial plenty than in these times of scarcity.

4. New practices entailing a significant amount of change live or die by the amount of personal assistance they receive.

Typically, most of the assistance provided to users of new practices occurs at the "front-end" (Crandall, 1979), that is, before use in classrooms actually begins. Many dissemination programs provide good awareness sessions, easily accessible demonstration or observation opportunities, solid initial training, and generally high-quality materials, but leave schools to their own devices when the project is actually under way. Most of those devices are feeble ones: they can, and do, compromise project success. This seemed to be the case with commercially distributed practices--new textbooks and teaching manuals, for example--which are seldom used once ordered.

Successful sites have more diverse and sustained assistance. Effective assistance is user-oriented rather than innovation-oriented (or assister-oriented), and it gets more so over time. It can come from within the building or district as well as from outside. Its effects--such as reassurance, support, expansion of users' repertoires, problem solving, and increased interdependence--help users master the practice, which in turn leads to student gains and other school improvement goals.

Such assistance is not expensive, and a little, especially after starting up, goes a long way. A one-day follow-up visit from an external consultant is often worth three days of initial training. Peer assistance is easy to organize; coordinating follow-up assistance with a local teacher on a released-time basis is inexpensive and effective. Combining external with internal sources of assistance dramatically increases the amount of change that is brought about through either source by itself.

Our study design also enabled us to probe previously uncharted terrain. The next two findings contribute significant new clarity.

5. Concrete steps must be taken to ensure that successful new practices are incorporated into an improved routine. School personnel implementing a new practice who do not attend specifically to its institutionalization may realize only ephemeral results.

Early empirical research stressed the importance of adoption, that is, the initial decision to use a new practice. (New practices that aren't adopted, of course, get no results.) More recent work showed that many adopted practices do not get used or get used indifferently, which also yields no beneficial results. This study, by concentrating on the dynamics of later implementation, found that thorough implementation is a necessary but not a sufficient step toward sustained improvement.

Well-mastered educational innovations may be discontinued--even those that show strong results. Although longevity is partly a district-level political issue (some poor practices get continued as well), there are concrete steps that local officials can take to ensure institutionalization. These include writing the practice into the school curricula, into standard operating procedures, and into yearly materials and staffing cycles. It also involves the elimination of competing practices.

Actually doing this depends largely on central office support -- hence the crucial role of the central office administrator closest to the new practices. Routine, well-institutionalized practices are likely to be expanded to the full pool of eligible classrooms and schools. Finally, they are resistant to what we have come to call "environmental turbulence" -- budget cuts, referenda, sudden personnel turnovers -- which often cripple or even destroy practices that are equally effective but less well tied-down organizationally.

Thus, making sure the new practice sticks pays large dividends and clearly warrants the attention of external facilitators who, we found, contribute significantly to this outcome.

6. School building staff do not experience federal dissemination strategies as more or less intrusive than state or district strategies.

It is conventional wisdom that new practices developed where they are to be used are more appropriate than those developed elsewhere; the farther away from the classroom that development takes place, the less likely that the practice will succeed. Our findings give this notion a new and somewhat contradictory twist.

Given the organizational reality of schools, improvement efforts that involve more than a single classroom depend on administrative endorsement for their legitimization and formal launching. Consequently, despite the satisfaction they report from appropriate early involvement and influence in key decisions, for teachers in a school, nearly any practice coming from elsewhere is experienced as externally developed, unless of course they themselves are the developers. Often, in fact, state- and district-level projects are pressed on teachers somewhat harder than those disseminated through a federal program such as the NDN, which is expressly designed to encourage consideration of alternatives and local choice.

Nor does it appear that locally developed practices, as exemplified by the Title IV-C program, necessarily fit local schools or classrooms better than those disseminated by states or through federal programs. Moreover, their outcomes are not substantially greater, though their costs are. Disseminated practices get negotiated, adapted, and reconfigured about as much as those developed locally get redesigned and amended.

Thus, the old argument of local versus external development is a red herring. The real issues are the availability of proven alternatives, adequate resources, and administrator-teacher relationships characterized by cooperation and mutual influence.

Turning to the broadest level of the study, we made two major discoveries about the federal and state components of dissemination strategies.

7. There are vast differences in the assumptions underlying the dissemination strategies of different federal programs, and consequent differences in their dissemination procedures and structures.

The diversity in program strategies seemed to spring from three factors. The first and most basic is the program's assumptions about the federal role in encouraging school improvement. Should it be passive or active? Should it create its own distribution system or use the private sector?

Second, the level of development and professional consensus in the program's content area will greatly influence the dissemination strategy. Where a field is relatively mature and stable and much is known about the effectiveness of alternate approaches--such as reading instruction--many proven practices can be readily identified and made available through a dissemination strategy. In contrast, in a field where little is known or agreed, such as computer literacy, only some research information, untested curriculum materials, and a few promising practices can be disseminated.

Finally, the strategy chosen will likely reflect the level of confidence in evaluation and other objective quality-control mechanisms. In some cases, panels or teams can be used to certify practices as effective and screen their entry and promotion through specially designed structures. By contrast, the wholesale distribution of any and all information and ideas that may offer an incremental improvement in a particular area indicates less certainty and a much lesser willingness to invest extensively in the innovations.

Even more diversity exists in state agencies. Some resist dissemination altogether, others see their role as restricted to the maintenance of schools within their state, and only a few mount serious campaigns directed at school improvement.

Our second major finding from our federal and state inquiry is:

8. There is minimal coordination among federal programs, among offices within state agencies, and between federal and state agencies. This often results in much "reinvention of the wheel," duplication of effort, and failure to mount comprehensive efforts with the potential of significant school improvement.

Some federal programs have made great efforts to coordinate, such as ESEA Title I and Follow Through's use of the National Diffusion Network as a dissemination vehicle. Likewise, within some states (e.g., Illinois and Maryland) there is much coordination and integration of federal and state resources to orchestrate a comprehensive school improvement program. But overall, coordination is minimal, both within state agencies and between state agencies and the U.S. Department of Education. Furthermore, our state study confirmed that federal dissemination programs do not often activate state school improvement initiatives--they merely increase the accessible resources for states that are already active and improvement-oriented.

As a result of the federal and state components of the study, we know the important components of a dissemination system, what variations are possible, how they can be put together, and with what results. We have some insights into the effective functioning of state education agencies. These insights are headed by a "people" factor, namely leadership by a strong chief executive capable both of articulating a vision of an improved future and mobilizing the necessary political and economic resources to realize it. This leadership must be coupled with policies that enable the agency: to move from being wholly regulatory to being more assistance-oriented; to create state-wide assessment and planning processes that provide impetus at the individual building level; and to muster the expertise and resources to aid local schools in effectively developing or selecting new practices, and implementing them.

These insights encourage us about the potential of some states to fulfill the challenge of increased state control and support of school improvement. But at the same time they discourage us about the states where this challenge is arising in arenas not characterized by vigorous improvement-oriented leadership. In such states, which vastly outnumber those where such leadership is presently apparent, the requirement for leadership devolves to the local level. Often, this is by conscious design based on deeply held beliefs and long-standing custom. But, in such cases local leaders need support and assistance from another source to sustain their risk-taking and complement whatever peer support they have managed to activate. Here is a possible federal role and, it can be argued, a responsibility, given the critical part that education plays in ensuring our nation's future. Much can be done with what is now known, and at a modest price, <u>if</u> that knowledge can be applied appropriately in the rapidly changing policy environment.

A ROADMAP TO SCHOOL IMPROVEMENT

In today's educational climate, schools are under great pressure to "improve." Generally the standards for improvement are set at levels above the school (e.g., state boards of education), but it is up to the school or district to determine just how it will achieve those standards. Our research indicates that most schools cannot be expected to do this alone, but that they must be provided with opportunities for improvement through facilitating structures, extra assistance, and resources. Further, these opportunities must mesh with the realities of everyday life in schools and must be feasible in terms of expense.

The achievement of improvement in schools takes a significant amount of time and its complexities require constant decision-making about the appropriate next and future steps. In this way, school improvement is similar to a journey to a distant place. There are always many ways to get there -- highways, farm roads, jeep paths, cross-country -- and at every turn the opportunity to change the route. There are also possibilities of detours, dead ends, running out of gas, and worse disasters.

In this section we continue this analogy by offering several paths to school improvement. The first -- our interstate highway -- requires clear direction, strong commitment, a moderate level of resources, and a definite role for every level in the education system. This is the route we consider optimal, given the learnings we described earlier and the constraints of the current context. Note that we are not proposing a "yellow brick road," where the yellow is pure gold and the endpoint, a fantasyland. Rather, we envision a well-constructed, yet typical interstate which gets us where we're going efficiently and at a reasonable price.

The other paths to school improvement that we describe are choices that can be made at each level of the schooling enterprise. We point out these alternatives because they usually offer some advantage that our interstate doesn't, and because all of them are being or have been tried. In most cases they are the scenic routes: they require more time, or money, or coordination, or luck, than our interstate. Yet they are all worthy of description, even if not of recommendation.

Our preference for an interstate model is grounded in three fundamental premises. First, that classrooms and schools are the building blocks of school improvement. Second, that a conscious attempt to aggregate the many successes underway at these levels is a more viable stragegy for the next decade than attempting to construct elaborate new structures. Of course, the pursuit of one does not preclude the other. However, we feel that a more conservative approach which works from the ground up, building on the firm foundation of knowledge and experience we now possess, is far less risky (albeit not as dramatic) than grand new designs which begin at the top in the ether of too vague visions. Lastly,

we are convinced that school improvement must be a national endeavor, the pace, quality, and enjoyment of which is dramatically enhanced by easy access to fellow travelers and traveler's aid. The imperative for improvement was never more urgent; its pursuit must call on resources wherever they reside.

Journey on the Interstate Highway

Beginning at the Local Level

Our image of the most efficient and effective road to school improvement begins in the school or district. There, a need is discovered or energy and attention crystallize around a priority: students lack composition skills, career ideas, or study skills; discipline is a problem; parents are pushing for the use of computers in classrooms; staff morale is low. Depending on the origins of the initiative, a leader emerges or is designated to take responsibility for mounting a response, what devotees of the process call "a change effort." When events can be organized optimally, and especially if the effort involves many schools, the best place for the leader to be located is at the central office. The most important thing is to ensure that he or she will likely have the resources and "clout" (or ready access to both) to make things happen. We have dubbed this person our "local facilitator."

If the local facilitator is either seasoned or smart in the ways of school improvement, early on he or she goes "shopping" for practices that have been proven to work in other settings (i.e., that have worked demonstrably well in ameliorating a comparable problem, with similar kinds of students, teachers, and/or schools). Since a substantial community of knowledgeable helpers has been developed over the past ten years, the first step for many local facilitators is to contact the State Facilitator of the National Diffusion Network, and, when one exists, a person located in an intermediate unit or in the state agency who is responsible for disseminating practices developed within the state. This "external facilitator" helps clarify the situation faced by the local facilitator and presents the array of practices available for adoption; together they look for possible matchups. (This straight ahead scenario assumes a problem or need that maps onto a pool of readily available proven practices, such as the basic skills. In areas where no ready pool of alternatives exists, alternative paths are indicated. These we take up later.)

Once the choices are narrowed, often with the advice of one or two key influentials in the school or district, the local facilitator works energetically with teachers and administrators to review the practices and select one for adoption. A well thought-out implementation plan is created. To keep on track, a checklist of critical steps is prepared. (Some veterans may be able to keep this in their heads, most of us need it on a piece of paper.) The plan includes provisions for: orientation sessions for everyone who will be involved; required materials and equipment; released time for teachers and support staff; initial training by the developer

of the practice or a certified trainer; follow-up sessions; and monitoring and evaluation strategies. Timelines are identified and responsibilities assigned. Line administrators (principals, assistant superintendents, the superintendent) make public statements about the importance of the new practice and their commitment to support its use.

As the implementation unfolds, the local facilitator continues to orchestrate the effort, making arrangements and being "on call" to teachers after initial training, and convening regular problem-solving sessions. Since our scenario is concerned with proven practices that have met the test of success in typical classrooms, the local facilitator stresses that there is a "right" way of implementing them. The goal is a fairly faithful replication of the original program. The principal monitors progress, reinforcing the local facilitator's requirement for teachers to stay with the practice's original design, while ensuring that they get help when they need it. Because the new practice may require teachers to try out some quite different behaviors, they need the room to make mistakes. Thus, any teacher evaluation for the first full year with the practice is focused on progress toward routine competence with the new practice, not on student growth.

In another orchestration task later in the implementation process, the local facilitator works with building and district administrators to see to it that the practice, if successful, is built into the permanent routine, or "institutionalized." This means not orphaning the project when other priorities demand attention; creating a budget line item for supplies, training, coordination, etc.; writing the practice into curriculum guidelines; training new and transferred teachers in its use; spreading it to other teachers, grade levels, and schools; and designating responsibility for continuation to those at appropriate locations who have the necessary time, commitment, skills, and energy.

Support from Other Levels

While the first part of our journey occurs at the local level, much needs to be done at other levels to keep the road surface smooth and free of major obstacles. Thus far, we have provided a view of that section of our roadmap that magnifies the local level. We have provided greater detail because this is the most important arena for action and the one whose complications govern responses at other levels. For most school people to successfully engage in the process described above, an infrastructure must exist, one that has supporting roles for federal and state governments and intermediate agencies.

That infrastructure must first be characterized by vigorous leadership at all levels. We have already implied a need for such leadership at the local level. But, it is easy to drift into maintenance of the status quo if the pressure isn't constantly on to improve. Such pressure is necessary not because educators are unwilling to improve but because maintaining a focus on

substantial improvement amidst the quotidian press of conflicting and often muddled priorities is truly difficult. At increasingly higher levels, this pressure is more general and has fewer requirements. And always it is linked to assistance and support, or only "lip service compliance" will result.

What does this mean in operation? Vigorous leadership from the federal government means keeping education in the public eye as a clear priority. It means highlighting and rewarding successes, and supporting interstate networks to broaden their effects. It means identifying areas in which we have failed nation-wide to provide excellent and equitable educational programs, and providing resources to address such national problems. Finally, it means expanding both our knowledge base and the means for educational practitioners to access and use existing and emerging knowledge in the business of "keeping school."

While these federal roles are quite broad, roles for the states are less so. Vigorous, visionary leadership at the state level involves making improvement the priority of every school in the state, and creating the means for that to occur. A mandate for improvement provides the impetus that many schools need to examine and confront their own problems and take real steps towards solving them. Such a mandate can be in the form of a required local planning process or state-wide assessment system. But it is only effective when linked with resources to deal with the problems. A pool of adoptable practices, a program of grants for adoption or development (should no appropriate practices exist), a concerted effort on the part of the state agency to arrange for training and support in selected practices -- these can all be effective strategies.

Their effectiveness is further enhanced by assistance to those responsible for improvement efforts in schools and districts. Principals' academies, administrator networks, and institutes for facilitators, when infused with knowledge, strategies, and tools for effecting change, are viable vehicles. Creating support systems for those responsible for change is as important as creating them for teachers.

Given the first requirement of vigorous leadership, we turn to more specific agendas in maintaining our interstate highway. Where do the practices come from that allow solid, viable choices to local schools? State and federal governments need to maintain and expand the resource pool of effective instructional practices as well as support the structures that will facilitate their transfer to other schools. Having already invested heavily in the development of projects in a variety of areas (e.g., reading and language arts, special education, early childhood), governments need to support ways for more educators to take advantage of others' success. In-state dissemination networks such as those in Michigan and Illinois and national efforts such as the National Diffusion Network are the only surefire way to realize an adequate

timely return on these heavy investments, osmosis not being a defensible improvement strategy. We know that a practice developed in California can work effectively in New Jersey, and can be adopted in New Jersey for far less money and far less time than a new one developed, given just a little help.

The various state and national pools of practices that have been validated by state or national panels such as the Joint Dissemination Review Panel, can be augmented (so as to further enhance local choice) by active "search and seizure" operations. Federal program offices and state departments of education can cooperate to locate practices with validation potential, and assist them in meeting the requirements of the validation process. Validated practices should be funded for a minimum of four years, to accelerate their outreach activities, broaden the audience of potential beneficiaries, and offset the costs of adoption by local schools. They should have the opportunity for refunding should a continuing demand for them exist.

Of course, in some areas where local schools have pressing or persistent needs, validated practices -- or even ones with high potential for validation -- don't exist. These areas are ones where evaluation has proven difficult (e.g., bilingual education and adult literacy), or where the need is very recent and there has been insufficient time for extensive development and field-testing (e.g., technology). Governments also have a role here: to establish a screening process for and a pool of "promising" practices, comparable to that of validated practices. Promising practices could be funded for focused evaluation, final development, and limited dissemination for two years, with opportunity for refunding only if they survive a rigorous quality control review.

The general need for visible government leadership in highlighting school improvement and supporting structures for disseminating successful practices is clear, but there is also a special role for some states. When needs exist in a state that are not met by the existing federal pool of practices, focused efforts must be made. For example, a state may need programs to educate a particular immigrant population; a state with a mandated teaching effectiveness program may need more practices that build generic teaching skills; or a state with an extensive high school science requirement may need practices adapting science content to different ability levels. In these instances, it falls to the state to identify gaps in the available pool and fill them. Where their circumstances are provoked by federal policies, the federal government should help.

The infrastructure for school improvement does not end with the existence of a pool of practices that are available for adoption by local schools. Research findings from a variety of studies are conclusive: practices need to be delivered by people if change is to occur.

Given that school improvement is a national imperative, supporting a strong interstate "delivery" system is a vital function for the federal government. The prototype for such a system is the National Diffusion Network (NDN). The NDN funds dissemination generalists in each state (State Facilitators), who are responsible for knowing the principles of successful school improvement. Currently they are familiar with the pool of validated practices. Assuming the addition of a pool of "promising" practices, they would add those to their repertoire. In their role of linking schools with such practices, State Facilitators help schools identify their specific needs, and match them with available resources. It is a vital role, essential to the efficient functioning of what must remain a loosely-connected enterprise, responsive to changing local priorities.

But the current State Facilitator job description says little concrete about their relationships with local schools. Our findings suggest that when a school or district decides to adopt a practice, the State Facilitator should require 1) the identification of a local facilitator (that is, someone responsible for orchestrating the process); 2) a detailed plan for adoption, implementation, and institutionalization (including tasks, responsibilities, time-lines, resources); and 3) authorization of the plan by a line administrator (generally a superintendent or assistant superintendent). In short, they need to do more following adoption to assist schools to implement and institutionalize new practices.

State Facilitators currently form a loose partnership with the developers of validated practices who, as we noted earlier, are funded to train schools in their use. If they were to apply our findings to their work, State Facilitators would "know" each developer's practice through some device similar to the Practice Profile. The profile would be especially created by the developer to describe the key features, implementation requirements, and characteristics of the practice in action. Armed with a file of such profiles, the State Facilitator can streamline the process of selecting an appropriate practice, helping assess the gap between current practice and the demands of the innovation. This process would also allow the State Facilitator to focus the initial training and participate meaningfully in monitoring the implementation and in mobilizing needed followup.

Training sessions for relevant role groups (teachers, principals, support staff) should home in more precisely on the group's concerns about the practice and their role in its use. It is important that the sessions involve "hands-on" activities that engage participants in using the practice. These should be followed by coaching in each teacher's classroom, in the form of assistance and feedback by the trainer, local facilitator, or other staff especially prepared for this task.

While an enhanced and federally supported National School Improvement Network is essential, there is a key role for the states. In our "interstate highway" image of the road to school improvement, state education agencies would coordinate their activities closely with the designated State Facilitators. It may be that their role is bolstered with state funds to disseminate state-validated practices as well as those in the national pool. State-initiated school improvement programs may build in interactions with the State Facilitator at the stage where local schools are seeking answers to their identified needs. Wherever possible, state mandates and directives should incorporate the national resource pool as either a possible or recommended source of proven alternatives that offer a cost effective vehicle for improvement.

The Paths Not Taken

Earlier, before describing our interstate highway, we noted that there were other possible ways to reach, or at least to set out towards, improvement in schools. These are paths we are not recommending when proven practices exist, as they do for most of today's persistent problems. In this section we select some of the more common, or some that seem to be advocated in important circles, and say why they have been bypassed.

Local Strategies We Don't Recommend

Local Development. To many, development of a new practice by a school or district for its own use is the "scenic route." The practice, proponents say, is more finely tuned to the wants and needs of the individuals who will use it, and engages them in the rich details of development and preparation.

Our study indicates that, overall, there are no differences in the outcomes of locally developed and externally developed implementation efforts. However, the cost is quite different. Development requires more resources, often costing 20 times the adoption of a new practice for the same number of teachers. Local development also requires more coordination (we found up to 12 individual consultants used by some Title IV-C local development efforts). Further, our conversations with teachers led us to conclude that anything that they themselves did not develop for use in their classrooms was considered "externally developed." So, whether it came from the central office or across the country, they felt equally "disengaged" at the outset.

The only time we support local development is when practices simply do not exist to meet local needs. Then we not only support local development, but urge that such practices be carefully evaluated, so that successful efforts can be validated for dissemination to others, should others be experiencing similar needs.

Protracted Planning or Analysis Paralysis. Here, we refer to an activity used extensively by schools to engage all (or most) of the school staff in a complex process that takes many steps and a long time to reach a decision about a problem solution. Admittedly, the intention is often a decision to adopt a new practice, part of our recommended strategy. But there are several features of this approach that we cannot recommend. The most glaring are the time and energy devoted to developing "ownership" before a solution has been selected, and the frequent neglect of a careful, well-supported implementation effort after the selection has been made.

Our findings are clear on this point. School improvement efforts that do not engage teachers extensively before initial training, that mandate priorities and ensure participation, albeit humanely, and that do not use precious time and resources to develop what can only be abstract ownership ahead of time, can be just as effective as projects where all this does occur. And "effective" here means not only a high level of implementation, but satisfied, highly committed teachers as well. The key is being confident and competent enough to survive the inevitable rough start, providing strong direction, and most important, supplying ample, appropriate, ongoing assistance and support. In short, exhibiting forceful leadership.

Further, the balance of attention to "front-end" and "back-end" activities is crucial: the more evenly distributed, the greater the probability of success. School improvement efforts that focus primarily on "up-front" problem solving and ignore or give short shrift to implementation and ongoing support have to rely on luck to succeed. If, on the other hand, school officials accept our findings about the need for more resources allocated to activities following the adoption decision, but still insist on the early resource-heavy problem solving, the cost of the effort could double. We cannot support double cost for no better results. Changing the distribution of typically available resources, however modest, will yield substantial rewards.

Strategies at the Government Level We Don't Recommend

Capacity Building. Federal and state programs for improving schools frequently focus on "building the school's capacity" for solving its own problems, managing change, and generally renewing itself continuously. The experience of the last decade indicates that this is, at bottom, a quixotic aspiration, at least with the strategies typically available to policymakers. Findings from our study lead us to believe that such increased capacity is virtually impossible to develop in the abstract. Capacity collapses rapidly if it isn't used, is not melded with programmatic priorities, or remains organizationally separate and peripheral to core activities; witness the fate of most State Capacity Building Projects (Thompson, 1982).

When canvassing our states for programs which reached schools and lead to classroom improvements, we were only able to identify one, the Title IVC Local Development activity. This causes us to be very skeptical of strategies that are overly general and unfocused, do not attend explicitly to implementation issues, locate assistance too far from local schools or make it difficult to obtain rapidly, and seem grounded in some vague version of a trickle-down approach to change.

Therefore, we conclude that a far more promising strategy is one that focuses on the implementation of curricular or instructional practices that require major changes in the daily work of classroom teachers and includes conscious plans for aggregating successes across classrooms to the building level and beyond. We believe that such a strategy hews closer to what schools are really about and thus, has real potential for changing the school's organizational structure and its capacity for making future improvements over time. Achieving improvement in the classroom, the location where student outcomes are most heavily influenced, builds commitment, enhances teachers' sense of efficacy, and establishes partnerships among teachers and between teachers and administrators where none existed before. When everyone does their job to make the practice "stick" (as discussed earlier), one success can lead to another. Thus, while we applaud the concept of "capacity building," we would rather put our money on something attainable; hence our advocacy of a bottom-up-and-out strategy as the most effective means of improving schools.

Rhetorical Leadership without Resources. The movement by the current administration to relieve the federal government of any responsibility for schooling prompts an intriguing image of the road to school improvement. Critics of government intervention imagine problems solved and decisions made wholly by local communities and educational practitioners, with networking and diffusion of new ideas as natural occurrences that happen when needs arise. For us, this romantic vision creates an image of potential chaos, of bulldozers and trucks full of asphalt constructing 50 unconnected highways or, at the extreme, 16,000 -- one for each school district in the country.

Our earlier discussion clearly indicates our support for a continuing federal role in dissemination for school improvement. The scenario we described as our interstate highway is not heavy with federal control or paperwork; instead, the first principles it embodies are local choice and initiative, with few strings attached. Further, it is far more cost feasible than everyone developing their own new practices. If, for example, the entire FY 83 funding for the National Diffusion Network were distributed equally across schools districts in the U.S., each would get less than $700. The power of a national system that finds successful practices, delivers them to the door of welcoming districts, and assists them in using them is far more effective than the distribution of such minimal resources.

Just as the federal government is attempting to use block grants to move government responsibility for education to the states, so too will many states continue to simply pass on the funds to the locals and remain out of the school improvement business. Locals, they argue, know their needs best, and can best make the decisions about allocating resources and taking on new initiatives.

Preliminary surveys of use of block grant monies indicate that the modest dollars are going to the purchase of computer equipment and materials. While these may be at the core of some districts' school improvement efforts, the lack of resources for staff development, support staff, and release time (and, in fact, the reported decrease in all) is quite perplexing. We liken this to the American Automobile Association sending a member along a route knowing that the bridge is out.

We believe that states can have a highly influential role in encouraging schools to improve, and that they shouldn't abdicate responsibility. In times of scarce resources, public pressure to improve, and less and less federal guidance, states need to provide both the impetus and the resources (expertise, information, and practices, as well as money) to keep schools moving towards improvement. Without sensitive but forceful state leadership, or national leadership that provides cohesion to strong local efforts, little headway will be made. Let us stress that we are not advocating actions by the state (whether taken in Washington or in state capitals) that dilute local control. But the demand for improvement must be clear and unequivocal. Elected leaders must take the risk of leading; business as usual will no longer suffice. However, rhetoric alone is not enough; some resources must be released, and new frameworks must be sanctioned or old ones strengthened if true progress is to occur.

Perhaps the hesitancy of state and local officials to use their new discretion is warranted; federal education policy does seem often to be schizophrenic and confused, long on lofty rhetoric and short on realistic planning and resource allocation. Tax relief initiatives and shrinking departmental staffs take their own toll close to home. Unfortunately, these changes in the flow, focus, and amount of money come at a time when the larger system has just begun to apply its collective learnings about school improvement over the last decade. Committed, hard-working professionals are working side by side with new-found colleagues from an emerging dissemination and school improvement profession. The work of these school improvement generalists is grounded in practical collaborative action rather than ivory-tower theories unconnected to school and classroom realities. That this possible disjuncture coincides with a period of economic contraction is a double blow. Reversion to more primitive and conservative postures may be inevitable; the old sources of knowledge and strategies for helping may overpower the new, less well-entrenched upstarts who challenge the conventional wisdom. But, in our view, the absence of strong visible national leadership--advocating the successes we have seen and the strategies they imply--does not bode well for the future.

A Path to Success

Our summary of findings from the Study of Dissemination Efforts Supporting School Improvement would be incomplete without directing several messages to all members of the educational system.

1. School improvement is a highly complicated process which requires time and resources to be successful. Don't expect important changes to occur overnight, or for free. But equally important is the realization that we really do know how to do it better.

2. It takes people to help people change. While technical knowledge and skills, in the form of effective, validated practices, are critically important, these practices must be delivered and supported by sensitive, credible people.

3. Every individual and agency at each level of the education enterprise has an important role to play in improving teachers' delivery of instruction to students. Only when each level plays its role can the quality and content of education be upgraded.

4. Forceful leadership, linked with competent assistance and support, create the impetus and the wherewithal that are necessary for change. Formulating challenging goals and taking strides to meet them are important first steps, even if adjustments must be made along the way.

5. The current government-supported infrastructure for school improvement should be reinforced with well-informed policies and enhanced with more coordination between agencies and offices, and more attention to the current and future needs of schools. The federal investment of the 1960s and 1970s was a good one, and can benefit today's teachers and students if the structures for dissemination and support of school improvement are maintained and strengthened.

   These external support systems are the critical links that help hard-pressed schools. They bring relevant knowledge to the place where it can be considered, convert abstract options to concrete action alternatives, supplement internal energy and direction with external expertise and perspective, and enact a long-term commitment to renewal and reform nationwide. Their facilitator staffs are the weavers of the school improvement enterprise. Their actions transform separate threads into a coherent fabric, strengthened by the interlacing of layers and levels.

6. Last, but far from least, we must recognize that our pool of proven practices is not infinite and does not provide alternatives to all possible problems. R&D, whether done by local practitioners alone or in concert with trained specialists, must continue, especially in areas of critical need. Schools have a voracious appetite for new practices in relatively stable times; in a period of accelerating change, the demand will increase. Investing in the future while consolidating our present gains will require creativity and commitment, characteristics in large supply among the professionals in our study.

Educators at all levels face increasingly difficult choices about the roles, responsibilities, strategies, and approaches they should use to improve the nation's schools. Findings from the Study of Dissemination Efforts Supporting School Improvement should be of help in narrowing these choices and increasing the potential for success of those who vigorously take up the challenge. We look forward to sharing in your success.

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VOLUMES OF THE MASTER REPORT

People, Policies, and Practices: Examining the Chain of School Improvement, Volumes I-X, David P. Crandall and Associates, The NETWORK, Inc., 1982, 1,597 pages.

Presents the findings of The NETWORK's Study of Dissemination Efforts Supporting School Improvement, a comprehensive study (1) to examine dissemination and dissemination-related programs at the federal and state levels; and (2) to determine the effects of several of these programs on classroom practice and to identify factors contributing to program success. Descriptions of individual volumes follow.

Volume I: Setting the Stage for a Study of School Improvement, Susan F. Loucks, Joyce E. Bauchner, David P. Crandall, William B. Schmidt, and Jeffrey W. Eiseman, The NETWORK, Inc., 1982, 158 pages.

Provides an overview of the study, placing it within the context of federal dissemination-related school improvement policies and programs. Existing research on these programs is examined and synthesized and the evolution of the federal role in dissemination is traced. Also outlines the study objectives, specifies and characterizes the sample, and details the design and overall approach. Describes the study's "state-of-the-art" data collection and analysis methodologies, including the development of Practice Profiles for the practices studied, assessment of Levels of Use for each teacher, content analysis of all interviews, use of causal models to determine factors influencing outcomes of school improvement, and development of unique qualitative approaches to analyzing field data.

Volume II: Portraits of the Changes, the Players, and the Contexts, Susan F. Loucks, Pat L. Cox, Matthew B. Miles, A. Michael Huberman, and Jeffrey W. Eiseman, The NETWORK, Inc., 1982, 217 pages.

Based on a local site sample of 146 school districts, describes school improvement efforts supported by four different federal strategies (and representative programs): Interpersonal Linkage of Validated Practices (National Diffusion Network), Commercial Distribution (Bureau of Education for the Handicapped Market-Linkage Program), State Administration of Dissemination (ESEA Title IV-C Adoption Grants), and Local Development and Invention (ESEA Title IV-C Development Grants). Discusses the characteristics of the innovative practices, the people involved, and the contexts in which they occur; contributions of school personnel, local and external facilitators, and other sources of assistance; and outcomes from involvement in improvement efforts.

Volume III: Models of Change, Joyce E. Bauchner, Jeffrey W. Eiseman, Pat L. Cox, and William B. Schmidt, The NETWORK, Inc., 1982, 101 pages.

Designed and written primarily for the researcher or the research-oriented practitioner. Three causal models of the school improvement process are presented and are used to identify outcomes of implementation and the factors influencing success. One model predicts school-level outcomes, a second individual-level outcomes, and a third external facilitator activity. Findings obtained through the application of these models are reported, indicating factors that contribute to the success of an implementation effort. Implications for school and district personnel, external facilitators, and state and federal policy makers are discussed.

Volume IV: Innovation Up Close: A Field Study in Twelve School Settings, A. Michael Huberman and Matthew B. Miles, with Beverly L. Taylor, and JoAnn Goldberg, The NETWORK, Inc., 1982, 482 pages.

Provides a synthesis and analysis of in-depth ethnographic case studies of twelve school districts engaged in school improvement efforts (a subsample of the study's 146 districts). All districts were implementing new practices, seven using National Diffusion Network innovations and five developing and implementing practices of their own design funded through Title IV-C Development Grants. Each stage of the implementation process is portrayed, from pre-adoption to institutionalization, when it occurred. The motivations, behaviors, and aspirations of school personnel involved in the improvement effort are explored; aspects of the implementation process, including factors affecting its success, are examined; and outcomes, including impact on students, are discussed. Four patterns leading to the success or failure of implementation are identified: "enforced, stabilized use," "overreaching," "blunting/downsizing," and "indifference/ discouragement."

Volume V: Dissemination for School Improvement: An Analysis of Nine Federal Education Programs, Glenn Shive and Jeffrey W. Eiseman, The NETWORK, Inc., 1982, 77 pages.

The development of federal dissemination-related school improvement policy is depicted through short case studies of nine distinctly different programs sponsored by the then U.S. Office of Education: ESEA Title III/IV-C, the Joint Dissemination Review Panel, the National Diffusion Network, ESEA Title I, the Follow Through Program's Resource Centers, the Handicapped Children's Early Education Program Outreach Centers, the Market Linkage Project created by the Bureau of Education for the Handicapped, ESEA Title VII's National Bilingual Network, and ESEA Title II's Basic Skills Improvement Program. Assumptions about the transfer of information and practices and the ways in which these assumptions and the developing dissemination knowledge base

influenced individual program strategies are identified and explored. Thirty-two specific recommendations for restructuring and redirecting federal school improvement efforts are discussed.

Volume VI: Dissemination at the National Institute of Education: Contending Ideas about Research, Practice, and the Federal Role, Charles L. Thompson, The NETWORK, Inc., 1982, 215 pages.

Provides an analytic history of dissemination at the National Institute of Education, focusing on six dissemination-related programs supported by the Institute: Educational Resources Information Center (ERIC), State Dissemination Capacity Building Program, Urban Sites/Documentation and Technical Assistance Program, Teachers' Center Exchange, Research and Development Utilization Program, and Research and Development Exchange. The emergence, implementation, and (when possible) results of the six dissemination programs are described within the social and political context affecting the Institute's development and/or support of these programs. Analyses of the different interpretations of dissemination associated with each program and their relationship to research, practice, and the federal role in education run throughout the volume, providing the author's interpretation of the descriptive material.

Volume VII: The Configuration of Federal and State Relationships, Pat L. Cox, The NETWORK, Inc., 1982, 171 pages.

Discusses the findings of the study's state component, especially as the activities of the states relate to and are influenced by federal dissemination programs. An analysis of the dissemination and school improvement activities in ten states revealed two distinct orientations. Some states were "maintenance" oriented, maintaining a separation between the dissemination activities of the various categorical federal programs and initiating no statewide effort or project for improvement. Other states had a "development" orientation, coordinating federal support in such a way that local education agencies were required or encouraged to mount efforts to improve their functioning and/or their instructional processes. The volume analyzes the antecedents, characteristics, and accomplishments of both kinds of states and draws implications for federal and state policy.

Volume VIII: The Infrastructure of Innovation: The Case of the National Diffusion Network, James A. Taylor, The NETWORK, Inc., 1982, 45 pages.

Focuses exclusively on the National Diffusion Network, examining how the program functions as a service delivery system. The central organizational aspects and practices of the NDN are explored within the context of its transformation from a set of independent contractors serving federal policy goals to an

enterprising grass-roots organization far less dependent on federal leaders for direction and control. Findings from a survey mailed to all funded full-time participants in the NDN, including Developer/Demonstrators, State Facilitators, technical assistance contractors, and federal employees, are presented and analyzed. They provide the basis for a concluding discussion of implications for implementation policy.

Volume IX: Implications for Action, A. Michael Huberman and David P. Crandall, The NETWORK, Inc., 1982, 86 pages.

Summarizes and synthesizes the outcomes of the study, describing the design, sample, analysis procedures, and findings from the federal and state components and the survey and field studies of local sites. The authors discuss in depth what was learned about the antecedents, characteristics, and outcomes of practice implementation. They conclude by describing ten messages for policy makers at all levels to consider as they work toward the improvement of classroom practice.

Volume X: A Roadmap for School Improvement: Executive Summary of the Study of Dissemination Efforts Supporting School Improvement, David P. Crandall and Susan F. Loucks, The NETWORK, Inc., 1983, 45 pages.

Provides a short, crisp summary of the study and its findings for educators at all levels. The authors suggest important considerations for federal and state policy makers as they support schools in their change efforts, and for school people who are committed to making effective and long-lasting improvements in their classrooms. An annotated bibliography describes the ten volumes of the study's master report, supporting documents from which the volumes were written, and additional publications that describe various study methodologies and findings for particular audiences.

SUPPORTING DOCUMENTS

A Study of Dissemination Efforts Supporting School Improvement: Conceptual Framework, The NETWORK, Inc., 1979.

Written to guide the research investigation by discussing the major areas of influence on school improvement. Within each area, it identifies variables that the relevant streams of theory and research, examination of federal dissemination program documents, observations of the researchers, and logical analysis indicate may be keys to the success of externally stimulated school improvement efforts.

A Study of Dissemination Efforts Supporting School Improvement: Final Study Design, The NETWORK, Inc., 1979.

Provides an overview of the research study and describes in detail the plans for obtaining, managing, and analyzing data. Describes the study objectives, the programs under study, research questions, sampling, instruments, and data collection management and analysis.

Case Reports of Twelve Field Sites, A. Michael Huberman, Matthew B. Miles, Beverly Loy Taylor, and JoAnn Goldberg, The NETWORK, Inc., 1982.

For each of the 12 sites included in the local field study component, a case report was written. These reports, ranging from 70 to 140 pages, follow a common data-reporting and display format. They describe the school and district setting, people, activities, and dynamics of the improvement process undertaken at the site under the auspices of ESEA Title IV-C or the National Diffusion Network. The authors recommend the "Carson" and "Masepa" cases for readers interested in comprehensive treatment, and the "Lido" case for a condensed treatment.

The Outcomes of School Improvement Efforts, Matthew B. Miles and A. Michael Huberman, The NETWORK, Inc., 1982.

Working paper that lists and discusses each of the 16 outcomes assessed in the survey component of the Study of Dissemination Efforts Supporting School Improvement. The measurement procedure for each outcome is described, as is any weighting or coding technique used. Frequency distributions are given for each group for which the outcome was assessed, and the outcome's robustness and usefulness are discussed.

SUPPLEMENTAL PUBLICATIONS

A Policy Study of Resource Centers for the Division of Follow Through, Glenn Shive, Paulette Meleen, Susan Harris, Larry Vaughan, and Marian Grogan, The NETWORK, Inc., 1980.

Describes the background of Follow Through Resource Centers and provides a thorough description of the Centers, the diffusion of Follow Through approaches, and policy choices for Resource Centers. An appendix includes recommendations for future administration of the Centers.

Dissemination Models and Technology Transfer Policy: Illustrations from Education, James A. Taylor and David P. Crandall, The NETWORK, Inc., 1980.

Defines dissemination as the process of providing information about a novel idea or practice to a potential user such that subsequent use is a likely outcome. Describes four dissemination programs funded by the Department of Education, contrasting them in terms of several important variables: product orientation, validation, adaptation, assistance, cost-benefit and congruence. Important issues for technology transfer are discussed.

This paper was presented at the annual meeting of the International Communication Association, Acapulco, Mexico, May 1980.

The National Diffusion Network: A Special Report, David P. Crandall, Charles L. Thompson, and James A. Taylor, The NETWORK, Inc., 1980.

Prepared for the U.S. House of Representatives Committee on Appropriations Survey and Investigations Staff. The first section provides a brief description of the National Diffusion Network (NDN). The second displays and discusses some preliminary, tentative, and largely descriptive findings from the Study of Dissemination Efforts Supporting School Improvement, with emphasis on data from the NDN sites. These findings include the activities of NDN State Facilitators and Developer/Demonstrators; the extent of implementation of NDN programs in the nation's schools; the benefits schools report that have resulted from using these practices; and the factors influencing success.

Overview of Dissemination Activities in the Department of Education, Karin S. Hellmer, Susan H. Harris, and Charles L. Thompson, The NETWORK, Inc., 1981.

Describes most of the significant dissemination activities supported by the Department of Education, summarizes the descriptions, and offers some interpretive comments. Forty-five programs are profiled (information on appropriations history, legislative authority, regulations, and contact information, as well as the dissemination activities).

"'Good News Schools' Share Common Characteristics," Linda Shalaway, in Educational R&D Report, 1981, 4(2), 7-13.

This article, based on an interview with study director David P. Crandall, reports preliminary findings from the Study of Dissemination Efforts Supporting School Improvement and highlights the key ingredients to successful implementation of innovative practices: quick, visible results; a critical mass of teachers; strong leadership and support of the building principal; support and orchestration by the central office; and innovations addressing real needs or problems.

School Improvement Through Dissemination: Strategies Unfolding, Glenn Shive and David P. Crandall, The NETWORK, Inc., 1981.

The development of federal dissemination strategies is explored through an analysis of four Office of Education programs that utilize a variety of dissemination strategies. These programs and strategies are ESEA Title III, representing the evolution of a "pure" demonstration program for local innovation; the Joint Dissemination Review Panel, capturing the role of evaluation in OE dissemination strategies; the National Diffusion Network, embodying multiple perspectives on school improvement in a single dissemination strategy; and the Market Linkage Project in the Bureau of Education for the Handicapped, exemplifying a systematic attempt to use the private sector in a dissemination strategy. Questions for federal dissemination policy that arise from the analysis of these programs and their respective dissemination strategies are identified.

This paper is a draft summary of comments presented at the annual meeting of the American Educational Research Association, Los Angeles, California, 1981.

Dissemination at the National Institute of Education: Contending Ideas About Research, Practice, and the Federal Role, Charles L. Thompson, The NETWORK, Inc., 1981.

Provides a brief analytic history of dissemination at the National Institute of Education, focusing on five dissemination-related programs: the Educational Resources Information Center, the State Dissemination Capacity Building Program, the Local Problem Solving Program, the Research and Development Exchange, and the Research and Development Utilization Program. Each program is described in terms of its definition of the dissemination problem, strategy for solving this problem, assumptions underlying the strategy, and what the experience of the program suggests about the effectiveness of the strategy and the accuracy of its assumptions. In conjunction with these descriptions, various political, organizational, and interpersonal forces that helped to shape the formulation, administration, and implementation of these strategies are discussed.

This paper is a draft summary of comments presented at the annual meeting of the American Educational Research Association, Los Angeles, California, 1981.

Resources for Evaluating Project Effectiveness: A Guidebook for Dissemination Practitioners, Adrianne Bank and Nancy Snidman, The NETWORK, Inc. and The Center for the Study of Evaluation, UCLA, 1981.

Especially designed for disseminators working within the National Diffusion Network -- State Facilitators and Developer/Demonstrators -- who wish to learn about general principles of evaluation and to have resources directly applicable to their own situations. Contains an overview of evaluation and discusses a planning process for conducting one. For each of the major activities in dissemination -- awareness, pre-installation, training, post-installation, and management -- evaluation questions, tasks, and procedures are suggested. Instruments currently in use by disseminators are included, with discussions of their validity and applicability.

How Will State Education Agencies Respond to the Consolidation of Federal Education Programs? Glenn Shive and Charles L. Thompson, written for the National Institute of Education's Legal and Governmental Studies Program, The NETWORK, Inc., 1981.

With the Education Consolidation and Improvement Act of 1981 came important changes to Title I of ESEA, and the consolidation of about 30 federal education programs into one block grant. Although producing only modest changes in the intergovernmental system compared to those the administration's original proposal would have made, the responses of local districts and states to the act would have much influence on future legislation.

This paper presents two alternative futures for SEAs under consolidation: one based on the more radical proposed consolidation and one based on the actual consolidation enacted in the ECIA. The futures are discussed in relation to the pressures that shape SEA policy making, the institutional environments of SEAs, and SEA organizational structure and leadership. Finally, SEA responses to the consolidation are differentiated by their general modes of adaptation, which are characterized as either "maintenance" or "development."

"Emulation and Replication: The Unspoken Covenants of School Improvement," David P. Crandall, in Teacher Education and Special Education, 1981, 4(2), 13-21.

Uses findings from the Study of Dissemination Efforts Supporting School Improvement to create a new and somewhat provocative image of schools and the improvement process. Reporting that change and instructional improvement are widespread in the educational system, the author argues that replication of proven practices is not only occurring but is desirable as well and that replication is made possible by teachers emulating trainers who are credible, reality-based purveyors of a classroom practice they have developed and/or used extensively.

The Practice Profile: An All-Purpose Tool for Program Communication, Staff Development, Evaluation, and Improvement, Susan F. Loucks and David P. Crandall, The NETWORK, Inc., 1982.

The Practice Profile is a standardized summary of the components and requirements of a new practice, program, or project. This paper describes the profile itself and a procedure for developing one and suggests several ways it is used to monitor practice and to design appropriate staff development strategies for implementation.

Drawing Valid Meaning from Qualitative Data: Some Techniques of Data Reduction and Display, A. Michael Huberman and Matthew B. Miles, The NETWORK, Inc., 1982.

As part of the Study of Dissemination Efforts Supporting School Improvement, a field study detailed the dynamics of implementation in twelve local sites over the course of a school year. In this paper, unique methodologies used to reduce and analyze the plethora of information gathered are described. These include the use of common data display formats, using matrices and figures for cross-site analysis.

This paper was presented at the annual meeting of the American Educational Research Association, New York City, March 1982.

"Fitting Words to Numbers," A. Michael Huberman and David P. Crandall, in American Behavioral Scientist, 1982, 26(1), 62-83.

Describes the interplay of quantitative and qualitative research methodologies used in the Study of Dissemination Efforts Supporting School Improvement to probe the dynamics of local innovation implementation. The relationship between field and survey methods is discussed first, including the complementarity of the conceptual focus, sampling, and instrumentation. Then the article focuses on the multisite field study methodology--the issues of validity and reliability and the techniques employed for data reduction and analysis.

Models of the School Improvement Process: Factors Contributing to Success, David P. Crandall, Joyce E. Bauchner, Susan F. Loucks, and William B. Schmidt, The NETWORK, Inc., 1982.

Provides an overview of The NETWORK's Study of Dissemination Efforts Supporting School Improvement, a study focusing primarily on the dynamics of local implementation efforts of federally sponsored school improvement activities. An individually focused model designed to test the causal relationships associated with selected implementation outcomes and perceived benefits of implementation is described. Also detailed is a complementary school-focused model exploring outcomes at the organizational level. Findings from both models are reported. Figures depicting the relationships among variables in both models are presented.

This paper was presented at the annual meeting of the American Educational Research Association, New York City, March 1982.

Building Administrators and Their Role in the Improvement of Practice, Joyce E. Bauchner and Susan F. Loucks, The NETWORK, Inc., 1982.

Focuses on the contributions of building administrators to school improvement. The data presented and discussed derive from a component of The NETWORK's Study of Dissemination Efforts Supporting School Improvement, which examined federal dissemination/school improvement strategies in 146 school districts. The assistance building administrators provide their staff is characterized in terms of the implementation of a practice and the long-term strategy developed to maintain the practice in the school. The general role of these building administrators is described. The effects of building administrators on local site improvement outcomes are explored, using both individually focused and school-focused models of school improvement. Numerous tables and figures supplement textual discussion, synthesizing study findings.

This paper was presented at the annual meeting of the American Educational Research Association, New York City, March 1982.

School District Personnel: A Crucial Role in School Improvement Efforts, Susan F. Loucks and Pat L. Cox, The NETWORK, Inc., 1982.

Focuses on the contributions of local facilitators (i.e., facilitators at the school district level) to school improvement. The data presented and discussed derive from a component of The NETWORK's Study of Dissemination Efforts Supporting School Improvement, which examined federal school improvement strategies in 146 school districts. Local facilitators involved in the improvement efforts are identified and characterized, their roles are described, and the ways in which they contribute to various outcomes of school improvement are specified. Relevant local facilitator-related data are summarized in eight tables. Figures depicting the impact of local facilitator assistance on a variety of classroom and school-level outcomes are discussed.

This paper was presented at the annual meeting of the American Educational Research Association, New York City, March 1982.

External Facilitators and Their Role in the Improvement of Practice, Pat L. Cox and Ronald G. Havelock, The NETWORK, Inc., 1982.

Examines the contributions of external facilitators (i.e., facilitators outside the school district they are assisting) to school improvement. The data presented and discussed derive from The NETWORK's Study of Dissemination Efforts Supporting School Improvement. The external facilitator sample is described and major formal role groups (of external facilitators) delineated. The initial contact between external facilitators and the schools they are to assist is briefly sketched. The authors present a detailed discussion of the kinds of assistance provided by external facilitators, in conjunction with accompanying tables. The effects of external facilitator assistance on outcomes at the classroom and school levels are explored. Figures depict the relationships among variables influencing improvement outcomes in two models.

This paper was presented at the annual meeting of the American Educational Research Association, New York City, March 1982.

Preparing Facilitators for Implementation: Mirroring the School Improvement Process, David P. Crandall and Susan F. Loucks, The NETWORK, Inc., 1982.

The preparation of implementation facilitators provides the focus of this paper. Included are three major sections. The first suggests that the process of preparing facilitators should mirror the process of preparing teachers to implement new practices. This recommendation is discussed within the context of key findings from The NETWORK's Study of Dissemination Efforts

Supporting School Improvement. In the second section, the application of these findings to facilitator preparation is explored. Section three specifies four strategies for responding to the need for skillful, knowledgeable facilitators: selection, training/education, developing a support system, and networking. Examples of these strategies are provided and their appropriateness under different conditions is discussed.

This paper was presented at the annual meeting of the American Educational Research Association, New York City, March 1982.

1983 PUBLICATIONS

Coordinating Assistance in School Improvement Efforts: Issues to Consider, David P. Crandall and Jeffrey W. Eiseman, The NETWORK, Inc., 1983.

Based on findings from The NETWORK's Study of Dissemination Efforts Supporting School Improvement, this paper briefly summarizes some of the study's main conclusions regarding the process of innovation implementation and school improvement. Particular emphasis is placed on the contribution of potential assistors to various implementation outcomes. Implications for principals, central office administrators, and facilitators are specified. Recommendations concerning the coordination of assistance in school improvement efforts are discussed.

This paper was presented at the annual meeting of the American Educational Research Association, Montreal, Canada, April 1983.

Antecedents and Outcomes of Assistance to Twelve School Improvement Projects, Matthew B. Miles, Center for Policy Research, 1983.

Designed to address three gaps in knowledge about the role of assistance in school improvement efforts: (1) how assistance is actually delivered in particular local sites, under what sorts of contingencies, and with what effects (causally specific data); (2) the chronological flow of assistance over time to sustained improvement projects; and (3) the antecedents of assistance. Findings from 12 ethnographic case studies, constituting one major component of The NETWORK's Study of Dissemination Efforts Supporting School Improvement, are reported and discussed.

This paper was presented at the annual meeting of the American Educational Research Association, Montreal, Canada, April 1983.

Inside-Out and Outside-In: Configurations of Assistance and Their Impact on School Improvement Efforts, Pat L. Cox, The NETWORK, Inc.

Based on data collected from external and local facilitators concerning the particular assistance they provide to schools engaged in school improvement efforts. The schools themselves constitute The NETWORK's Study of Dissemination Efforts Supporting School Improvement sample of 146 sites adopting or developing and implementing new practices sponsored by federal and state programs. The distribution of external and local facilitator assistance is described according to program and school site. The general patterns of external facilitator assistance are depicted; the activities included and emphasized in the assistance given by local and external facilitators are explored. The variation in certain school improvement outcomes is examined in relationship to

the presence of different assistance configurations, i.e., different combinations of external and local facilitator assistance to schools.

This paper was presented at the annual meeting of the American Educational Research Association, Montreal, Canada, April 1983.

Defining Fidelity: A Cross-Study Analysis, Susan F. Loucks, The NETWORK, Inc., 1983.

Examines the controversy between those who advocate the adaptation of innovations and others who emphasize the importance of replication, hypothesizing that the dispute is, in part, one of semantics. Four studies of the change process whose research questions and/or findings discuss the replication/adaptation issue are analyzed: the survey component of The NETWORK's Study of Dissemination Efforts Supporting School Improvement, the field study component of this same study, the Rand Change Agent Study, and the SRI International Study of the National Diffusion Network. Each study was examined to determine: (a) how "innovation" was defined; (b) sources of information used to determine fidelity; (c) unit of analysis; and (d) findings. Contradictory findings across studies are attributed in part to differing approaches to defining fidelity and examining adaptations, and to changes in the quality and level of school improvement efforts since the time of the Rand study.

This paper was presented at the annual meeting of the American Educational Research Association, Montreal, Canada, April 1983.

Emulation and Replication as a Scenario for Successful School Improvement, David P. Crandall, The NETWORK, Inc., 1983.

Argues that the high levels of fidelity to original innovations during implementation found by The NETWORK's Study of Dissemination Efforts Supporting School Improvement can be explained in large part by the phenomena of emulation and replication. Formal opportunities for emulation of credible trainers by teachers are discussed, focusing on characteristics of the "awareness conference" and the ways in which such conferences foster emulation of exemplary practices. Factors that can affect levels of emulation and replication are identified and explored. The paper argues that, under the right conditions, teachers can and do change, and that for most practitioners, replication is a "natural act."

This paper was presented at the annual meeting of the American Educational Research Association, Montreal, Canada, April 1983.

"At Last: Good News from a Study of School Improvement," Susan F. Loucks, in Educational Leadership, November 1983.

This article, the first of a series of six articles, provides a short overview of the Study of Dissemination Efforts Supporting School Improvement and its key findings. The article, like the series, is written for educational practitioners, especially those at the local level.

"The Teacher's Role in School Improvement: A New Picture of Success," David P. Crandall, in Educational Leadership, November 1983.

This article discusses findings of the Study of Dissemination Efforts Supporting School Improvement as they relate to the teachers who were involved in implementing new classroom practices. First the author describes the relatively widespread implementation found in teachers' classrooms, with a remarkable degree of fidelity to the practice as conceived by its developer. The author then suggests how this occurred, attributing the success to the use of well-developed, valid practices and trainers who inspire teachers' emulation by their knowledge and experience using the practice in classrooms.

"Supporting School Improvement: Complementary Roles of a Constellation of Assisters," Pat L. Cox, in Educational Leadership, November, 1983.

Describes the variety of roles that need to be played to assist schools and teachers in their improvement efforts. Discusses the activities of individuals outside a school district (external facilitators), inside the district with responsibility for implementation (local facilitators), and building principals. The interrelationships of these roles, and their optimal coordination, are also discussed.

"Unravelling the Mystery of Institutionalization," Matthew B. Miles, in Educational Leadership, November 1983.

Written for a practitioner audience, discusses the concept of institutionalization and its important place in the school improvement process. Describes factors influencing whether practices become institutionalized and the process that leads to successful institutionalization, illustrated with vignettes from the field study of twelve local sites.

"School Improvement Strategies that Work: Some Scenarios," A. Michael Huberman, in Educational Leadership, November 1983.

Describes four scenarios of improvement efforts that generally characterize the twelve local sites examined in the field study component of the Study of Dissemination Efforts Supporting School Improvement. The scenarios range from major success to dismal failure and vary in the amount and longevity of assistance given to teachers; in the strength of the leadership of a principal or central office administrator; and in the amount of latitude given the teachers to stray from the developer's original innovation. Implications for future improvement efforts are discussed.

"Applying Our Learnings About School Improvement to Today's Innovations," Susan F. Loucks and David A. Zacchei, in Educational Leadership, November 1983.

Argues that findings from the study can be applied to new practices teachers are currently implementing. Illustrates with the application of the learnings to a microcomputer-based writing curriculum, QUILL. The factors emphasized are ample, long-term assistance; clear administrator direction; a valid, well-designed innovation; and attention to institutionalization.

"Implementing Technology Through a Comprehensive Design for Staff Development," David A. Zacchei and Susan F. Loucks, in Journal of Staff Development, Fall 1983.

Describes a staff development program and support system developed for a new microcomputer-based writing curriculum called QUILL. The authors discuss the features of the program and how they reflect the findings of research on the school improvement process. Written for individuals responsible for inservice and staff development in school, district, and university settings.

Analyzing Qualitative Data: A Sourcebook of New Methods, Matthew B. Miles and A. Michael Huberman, Center for Policy Research, forthcoming.

A practical sourcebook for researchers who use qualitative data. Much of its content resulted from the authors' experiences in conducting the local field study of the Study of Dissemination Efforts Supporting School Improvement. The need addressed by the book is: How can we draw valid meaning from qualitative data? It discusses methods of analysis that are practical, communicable, and non-self-deluding and that include new types of data displays (i.e., graphs, charts, matrices, and networks). Each of 52 specific methods of data display and analysis is described and illustrated in detail, with practical suggestions for the user.

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